



A.D. 1854 N° 1566.

SPECIFICATION

OF

THOMAS MAYOS WOODYATT.

CONSUMING SMOKE IN FURNACES.

LONDON:

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1855.



A.D. 1854 N° 1566.

Consuming Smoke in Furnaces.

LETTERS PATENT to Thomas Mayos Woodyatt, of Kinver Mills, in the County of Stafford, Screw Manufacturer, for the Invention of “**AN IMPROVEMENT OR IMPROVEMENTS IN CONSUMING OR SUPPRESSING THE SMOKE OF STEAM ENGINE BOILER AND OTHER FURNACES.**”

Sealed the 27th October 1854, and dated the 17th July 1854.

PROVISIONAL SPECIFICATION left by the said Thomas Mayos Woodyatt at the Office of the Commissioners of Patents, with his Petition, on the 17th July 1854.

I, THOMAS MAYOS WOODYATT, of Kinver Mills, in the County of Stafford,
5 Screw Manufacturer, do hereby declare the nature of the Invention for “**AN IMPROVEMENT OR IMPROVEMENTS IN CONSUMING OR SUPPRESSING THE SMOKE OF STEAM ENGINE BOILER AND OTHER FURNACES**” to be as follows:—

My said Invention consists in introducing air into steam engine boiler and other furnaces in the following manner, by which said introduction of air the
10 smoke which ordinarily rises from such furnaces is wholly or in part consumed or suppressed. I effect the said introduction of air by building two walls, or a hollow or double bridge, in the place usually occupied by the ordinary bridge. The space between the said walls is closed at bottom by a plate of iron or other suitable material, the said plate being perforated with small holes. Air passes
15 from the ash pit through the said holes, and rising up the space between the

Woodyatt's Improvements in Consuming the Smoke in Furnaces.

two walls, constituting the hollow or double bridge, mixes with the gaseous combustible matter passing over the said bridge, and effects the combustion of the same. An opening which may be closed by a door is made at the side of the furnace immediately over the perforated plate, through which opening the dust which accumulates on the said plate may be removed therefrom by a rake 5 or otherwise.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Thomas Mayos Woodyatt in the Great Seal Patent Office on the 12th January 1855.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, THOMAS 10
MAYOS WOODYATT, of Kinver Mills, in the County of Stafford, Screw Manufacturer, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Seventeenth day of July, in the year of our Lord One thousand eight hundred and fifty-four, in the eighteenth year of Her 15 reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Thomas Mayos Woodyatt, Her special licence, that I, the said Thomas Mayos Woodyatt, my executors, administrators, and assigns, or such others as I, the said Thomas Mayos Woodyatt, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and 20 at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "AN IMPROVEMENT OR IMPROVEMENTS IN CONSUMING OR SUPPRESSING THE SMOKE OF STEAM ENGINE BOILER AND OTHER FURNACES," upon the condition (amongst 25 others) that I, the said Thomas Mayos Woodyatt, by an instrument in writing under my hand and seal, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters 30 Patent.

NOW KNOW YE, that I, the said Thomas Mayos Woodyatt, do hereby declare the nature of the said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof (that is to say):— 35

My said Invention consists in consuming or suppressing the smoke of

FIG. I.

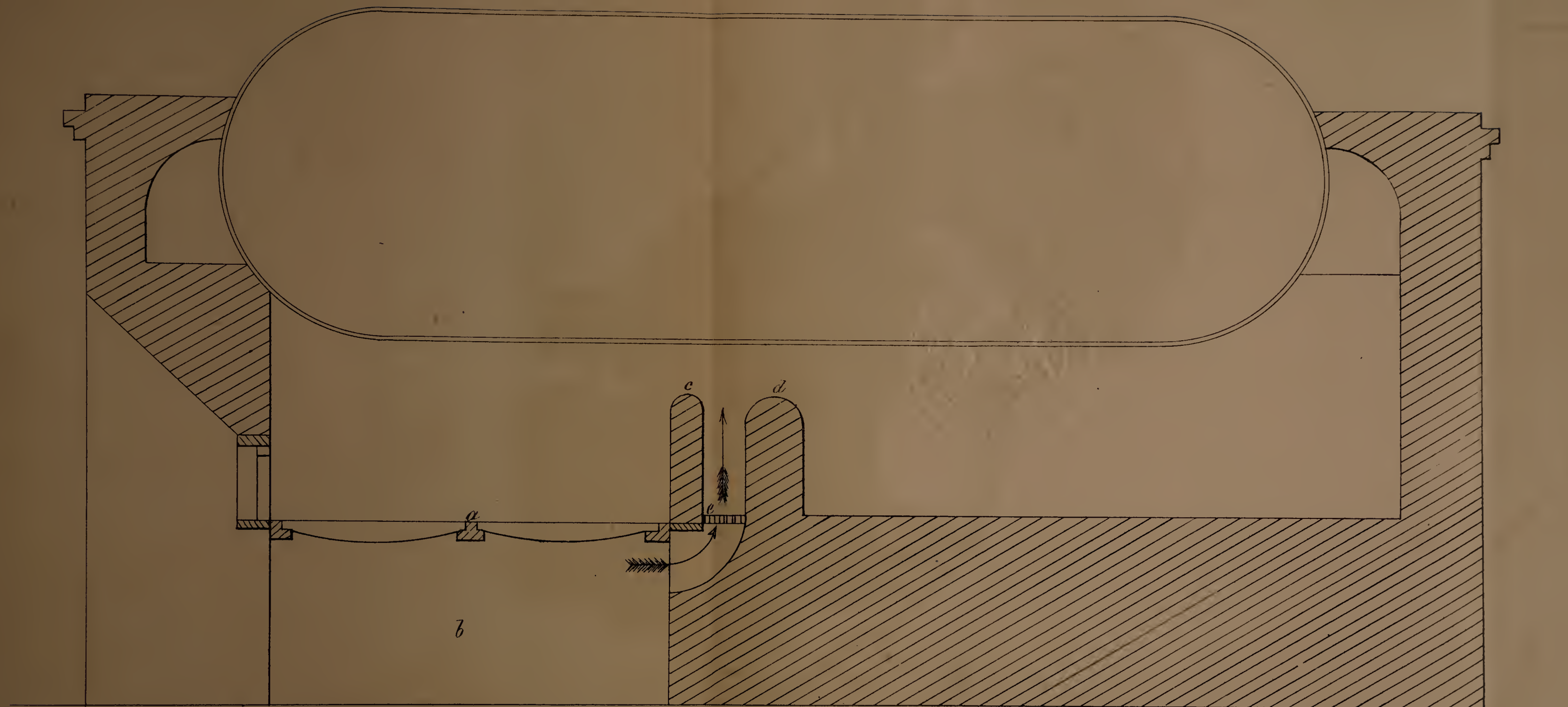
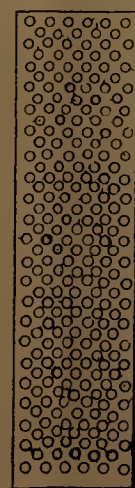


FIG. II.



The filed drawing is not colored.

Drawn on Stone by Malby & Sons

Woodyatt's Improvements in Consuming the Smoke in Furnaces.

steam engine boiler and other furnaces in the manner herein-after particularly described and illustrated in the accompanying Drawing.

Figure 1 represents, in vertical longitudinal section, a furnace of a steam engine boiler constructed according to my Invention. *a* is the fire-place; 5 *b*, the ash-pit; *c*, *d*, are two walls extending across the back of the furnace, and constituting a hollow or double bridge, occupying the place usually occupied by the ordinary bridge. The space between the said walls *c*, *d*, is closed at bottom by a plate *e*, of iron or other suitable material, the said plate being perforated with small holes. Figure 2 represents the plate *e* in plan. Air 10 passes from the ash pit through the holes in the plate *e*, and rising up between the two walls *c*, *d*, mixes with the gaseous combustible matter passing over the said bridge, and effects the combustion of the same. The course of the air is indicated by the arrows in Figure 1. An opening is made at the side of the furnace, immediately over the perforated plate *e*, through which said opening 15 the dust which accumulates on the said plate may be removed therefrom by a rake or otherwise. The said opening is closed by a door, excepting during the time of cleansing the plate *e*.

Although I have only described my Invention as applied to the furnace of a steam engine boiler, yet my said Invention is applicable to all furnaces in which 20 a bridge is or may be employed.

Having now described the nature of my said Invention, and the manner of carrying the same into effect, I wish it to be understood that I do not limit myself to the precise details herein described, as the same may be varied without departing from the nature of my said Invention; but I claim as my 25 Invention introducing air into steam engine boiler and other furnaces, for the purpose of suppressing or consuming the smoke thereof, through a plate, having small perforations situated at the bottom of a hollow or double bridge, as herein described and illustrated in the accompanying Drawing.

In witness whereof, I, the said Thomas Mayos Woodyatt, have hereunto 30 set my hand and seal, this Eleventh day of January, in the year of our Lord One thousand eight hundred and fifty-five.

THOMAS MAYOS WOODYATT. (L.S.)

Witness,

GEORGE SHAW.

LONDON :

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Printers to the Queen's most Excellent Majesty. 1855.

